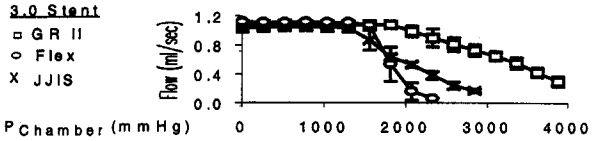
a stent to withstand pressures generated by coronary arteries during elastic recoil and variations in vasomotor tone. We evaluated *in vitro* the ability of FlexStent (Cook Cardiology), GR II (a modified form of FlexStent design) and JJIS (Johnson & Johnson) 3.0 and 4.0 mm diameter stents to resist external circumferential pressure and determined the threshold for stent collapse. A device was constructed to evaluate flow (perfusion pressure 90 mmHg) through silastic tubing containing an expanded stent as increasing external pressure was applied by a pressure chamber. Triplicate measurements were made for each stent size and design. Collapse threshold pressure (pressure at which flow through the stent decreased by 10%) and collapse slope were compared. *Results:*



Collapse threshold pressures were statistically higher for GR II 3.0 mm than other 3.0 mm stents. Collapse pressures for the 4.0 mm group were significantly different from each other (GR II > JJIS > FlexStent). Collapse slopes were significantly steeper for FlexStent than GR II or JJIS 3.0 mm ($P < 0.001$) and 4.0 mm stents ($P = 0.002$).

Conclusion: Modifications of the FlexStent design applied in the GR II stent have increased collapse resistance significantly. This demonstrates that some flexible stent designs can provide vascular support similar or superior to that of rigid stent designs.

1036-84 Acute Results of Adjunct Stent Following Directional Coronary Atherectomy

E. Bramucci, L. Angoli, P.A. Merlini, P. Barberis, J. Kubica, M.L. Laudisa, A. Mussini, C. Montemartini, D. Ardissino. *Division of Cardiology, IRCCS, Policlinico S. Matteo, University of Pavia, Pavia, Italy*

The bulk of the atherosclerotic plaque, which is displaced but not removed by balloon angioplasty (PTCA), opposes to optimal stent expansion and may limit the success of stent implantation. Directional coronary atherectomy (DCA), which removes the atherosclerotic plaque, might provide a better anatomical condition for successful stent implantation. This pilot study evaluates the acute results of combining DCA and stent implantation (Palmaz-Schatz) in a consecutive series of 68 patients with angina pectoris undergoing 71 procedures. As controls, we selected patients with the same inclusion/exclusion criteria, undergoing successful elective stent implantation (Palmaz-Schatz) during the same period matched for lesion site, lesion location, minimal lesion diameter and anginal status. Results obtained by quantitative coronary arteriography and statistics are the following:

Variables	pre-DCA	post-DCA	DCA + STENT
% Stenosis	74.6 ± 97	24.6 ± 9.8*	6.7 ± 8.8#
Absolute gain (mm)			2.44 ± 0.56#
Relative gain (%)			62 ± 13§
	pre-PTCA	post-PTCA	PTCA + STENT
% Stenosis	75.1 ± 7.3	34.3 ± 12.1	16.8 ± 11.4
Absolute gain (mm)			1.93 ± 0.61
Relative gain (%)			53 ± 14

*$p < 0.01$ vs post-PTCA; #$p < 0.005$ and §$p < 0.05$ vs PTCA + STENT.

In conclusion, stent implantation after DCA provides further improvement of the acute angiographic results obtained by DCA alone. The acute gain obtained by the combination of DCA followed by stent implantation is better than that obtained by stent implantation alone.

1036-85 Immediate and Short-Term Results of the Pilot Phase of Stenting After Optimal Lesion Debulking "The SOLD Trial"

I. Moussa [1], J. Moses [1], C. Di Mario, T. King [1], B. Reimers, A. Colombo. [1] *Lenox Hill Hospital, NY, USA, Centro Cuore Columbus, Milan, Italy*

Purpose: this ongoing prospective study tests the hypothesis that stenting after directional atherectomy (DCA) increases lumen gain and reduces restenosis. *Methods:* 33 pts (38 lesions) are included in this analysis. Stents used were (Palmaz-Schatz 17, Gianturco-Roubin II 6, other 15). Quantitative coronary angiography (QCA) and intravascular ultrasound (IVUS) measurements were:

	Baseline	Post-DCA	Post-Stent
QCA RD (mm)	3.21 ± 0.52*	3.26 ± 0.54	3.50 ± 0.59*
QCA MLD (mm)	0.77 ± 0.37*	2.36 ± 0.66*	3.48 ± 0.55*
QCA % DS	76 ± 11*	28 ± 16*0|8*	
QCA LL (mm)	11.12 ± 4.72	–	–
Vessel CSA (mm^2)	13.15 ± 4.34	15.11 ± 4.07	–
Lumen CSA (mm^2)	2.99 ± 0.88*	8.40 ± 2.79*	9.36 ± 2.08
% Plaque area**	76 ± 8*	43 ± 13*	–

CSA cross sectional area; ** % Plaque area = (vessel CSA – Lumen CSA)/Vessel CSA; RD, reference diameter; LL, lesion length; *$P < 0.05$.

Procedural success was 97%, one patient had emergency CABG, MI and died post surgery. No other pt had CPK rise more than twice of normal. No other events occurred at 1 month follow-up. *Conclusions:* 1- Stenting after DCA allows optimizing lumen gain with acceptable rate of complications. 2- Six month angiographic and clinical outcome will be available at the time of presentation.

1036-86 The Early Clinical Experience Using the Autologous Vein Graft-Coated Stent in the Coronary Arteries

C. Stefanadis, K. Toutouzas, C. Vlachopoulos, I. Kallikazaros, E. Tsiamis, C. Stratos, M. Vavuranakis, P. Toutouzas. *Department of Cardiology, Hippokration Hospital, University of Athens, Greece*

Experimental studies from our institution have shown absence of thrombosis and minimal intimal hyperplasia after the autologous vein graft-coated stent (AVGCS) implantation in peripheral arteries. The immediate results of AVGCS implantation in 38 patients (pts) are presented in this study. *Methods:* The right cephalic vein was isolated and a 3-cm vein graft was removed. A Palmaz™ or a Palmaz-Schatz™ stent was either covered completely (both internally and externally, type A AVGCS) or only externally (type B AVGCS) by the vein graft. The vein lining(s) was stabilised on the stent by sutures (Prolene 7–0). Thirty-eight AVGCSs (10 type A, 25 type B) were implanted in 38 pts (54 ± 4.8 yrs). Indications for AVGCS implantation were as follows: 12 AVGCSs were placed in totally occluded vessels, 10 for treatment of acute myocardial infarction (AMI), 9 for elective stenting, and 7 as a bail-out device. The first 10 consecutive pts and the pts with AMI received anticoagulation. The rest of the pts left hospital under aspirin and ticlopidine. *Results:* In all cases the procedure of both types AVGCS preparation was feasible and short in duration (< 20 min). The delivery and deployment of AVGCS was successful and uncomplicated in all pts. The immediate angiographic results were excellent without any case of thrombosis. All pts were discharged without symptoms. The minimal luminal diameter (MLD) was increased from 0.29 ± 0.4 mm to 3.26 ± 0.7 mm ($n = 35$, $p < 0.001$). In 8 patients, an angiography was performed after 6.1 ± 0.4 months and the MLD was unchanged (after: 3.24 ± 0.3, follow-up: 3.08 ± 0.3 mm, p = NS). *Conclusion:* Autologous vein graft-coated stent preparation and implantation is a feasible procedure with excellent immediate results. Further studies will evaluate the indications and long-term efficacy of this technique.

1036-87 Comparative results of short versus long stenting

B. Chevalier, B. Glatt, T. Royer, P. Guyon. *Centre Cardiologique du Nord, Saint-Denis, France*

In order to assess the role of the stent length on the short and mid-term PTCA results, we retrospectively compared patients receiving coronary stenting with the Freedom™ stent using 25 mm as a threshold to separate short and long stenting. Clinical and angiographic data were similar but a lower rate of LAD lesion and a higher rate of occlusion in the long group. All pts received a ticlopidine/aspirin drug regimen. Results were:

		> 25 mm	< 25 mm	p
N (pts/lesions)		182/190	328/357	
Stent length (mm)		18 ± 4	42 ± 14	< 0.001
Stent/lesion ratio		1.28 ± 0.5	1.08 ± 0.3	< 0.001
Technical success (%)		94.2	95.5	NS
Procedural success (%)		98.9	98	NS
Clinical success (%)		98.3	97.2	NS
MI (%)		1.1	1.5	NS
CABG (%)		0	0.3	NS
Death (%)		0	0.6	NS
Stent thrombosis (%)		1.6	1.4	NS
6 months target late	revascularisation rate (%)	16.3	8.7	< 0.05

Thus, the stent length does not affect the short term results but induces a higher rate of reintervention. Further studies are necessary to accurately assess the clinical benefit of long stenting compared to plain balloon angioplasty.